COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
South Central Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Dominion Resources, Inc.
Hurt, Virginia
Permit No. SCRO-30871

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Dominion Resources, Inc. has applied for a Title V Operating Permit for its Hurt, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____
Keith Sandifer
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Air Permit Manager: _____ Date: _____
David J. Brown

Regional Director: _____ Date: _____
T. L. Henderson

FACILITY INFORMATION

Permittee
Dominion Resources, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Facility
Pittsylvania Power Station
821 Grit Road
Hurt, Virginia 24563

State-County-Plant Identification Number: 51- 143-0123

SOURCE DESCRIPTION

NAICS Code: 221119 – Electric power generation

Pittsylvania Power Station is authorized to operate an electric power production facility located in Hurt, Virginia. The plant uses three identically sized wood-fired spreader stoker boilers, each having a maximum rated capacity of 373.3 MMBtu/hr (heat input) to generate steam. The steam from the three boilers is directed to two turbine-driven electric generators, each with a rated maximum generating capacity of 45 megawatts (MW) of electrical power. The facility also contains one auxiliary diesel IC-powered electric generator and associated fuel storage tanks, wood storage, and handling equipment and ash handling and storage.

The facility is a Title V major source of nitrogen oxides, volatile organic compounds, and carbon monoxide. This source is located in an attainment area for all pollutants, and is a PSD major source. The facility was previously permitted under a PSD Permit issued on April 8, 1991, which was amended on February 21, 1992, January 19, 1993, June 7, 1994, September 28, 1995, November 6, 1996, April 9, 1997, March 24, 1999, and December 9, 1999.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit on August 22, 2007, was conducted on August 28, 2007. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

See Title V Permit Condition II.

EMISSIONS INVENTORY

A copy of the 2006 annual emission update is attached. Emissions are summarized in the following tables.

2006 Actual Emissions

	2006 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
Boilers	30.5	1165.5	12.96	12.5	300.8
Auxiliary Generator	Just tested				
Total	30.5	1165.5	12.96	12.5	300.8

2006 Facility Hazardous Air Pollutant Emissions

Pollutant	2006 Hazardous Air Pollutant Emission in Tons/Yr
Benzene	14.7
Chlorine	2.8
Formaldehyde	1.8
Hydrogen chloride	66.6

EMISSION UNIT APPLICABLE REQUIREMENTS – Boilers (Units 101, 102, and 103)

Limitations

All three boilers are permitted and are NSPS Subpart Db affected facilities. SNCR is used to control the nitrogen oxides, and multiclones in series with electrostatic precipitators (ESPs) are used to control particulate emissions from the three boilers. The facility has continuous emissions

monitors (CEMS) for NOx and either CO_2 or O_2 monitors for each of the three boilers. There is a continuous opacity monitor (COMS) located in the common stack.

Condition III.A.1 contains the particulate control equipment for each boiler. This condition is taken from the permit issued December 9, 1999

Condition IIIA.2 contains the nitrogen oxide control equipment for each boiler. This condition is taken from the permit issued December 9, 1999.

Condition III.A.3 contains the wood consumption limitation for the three boilers. This condition is taken from the permit issued December 9, 1999.

Condition III.A.4 contains the approved fuel (wood) and the definition of "wood". This condition is taken from the permit issued December 9, 1999.

Condition III.A.5 contains the analysis requirements of the wood. This condition is taken from the permit issued December 9, 1999.

Condition III.A.6 contains the emissions limitations for each boiler. This condition is taken from the permit issued December 9, 1999.

Condition III.A.7 contains the sulfur dioxide and sulfuric acid mist emission limits for the three boilers. This condition is taken from the permit issued December 9, 1999.

Condition III.A.8 contains annual emissions limits for the combined operation of the boilers. This condition is taken from the permit issued December 9, 1999.

Condition III.A.9 contains the opacity limitation for the boilers. This condition is taken from the permit issued December 9, 1999 which was determined to be BACT for the permit.

Condition III.A.10 requires a maintenance schedule and maintaining records of scheduled and non-schedule maintenance. This condition is taken from the permit issued December 9, 1999.

Condition III.A.11 contains the requirement to comply with 40 CFR 60 Subparts Db and A.

Monitoring

Periodic monitoring is not required for the boilers, since they already have CEMS and COMS. An increase in CO or VOC emissions would be the result of a boiler upset. The boiler operator has sufficient monitoring to be alerted to such an event.

Condition III.B.1 requires the facility to install, maintain, and operate continuous emissions monitors for opacity, nitrogen oxide, and carbon dioxide or oxygen. This condition is taken from the permit issued December 9, 1999.

Condition III.B.2 specifies the data capture, quality assurance, and reporting requirements. This condition is taken from the permit issued December 9, 1999.

Condition III.B.3 states that the continuous emission monitoring data may be used as evidence of violation of the emissions standards. This condition is taken from the permit issued December 9, 1999.

COMPLIANCE ASSURANCE MONITORING (CAM)

Generally, the requirements of 40 CFR 64, CAM, apply to each emissions unit meeting **all three** of the following criteria at a major source required to obtain a Title V permit:

- The unit emits or has the potential to emit (in the absence of add-on control devices) quantities of one or more regulated air pollutants that exceed major source thresholds,
- The unit is subject to one or more emission limitations for the regulated air pollutants for which it is major before control, and
- The unit uses a control device to achieve compliance with one or more of these emission limitations.

VOCs

Each of the three boilers (Units 101, 102, and 103) has the potential to emit greater than 100 tons per year of VOCs, but there are no controls for VOC at the facility. Therefore the boilers are not subject to CAM for VOCs.

NOx

Each of the three boilers (Units 101, 102, and 103) is potentially subject to CAM for emissions of nitrogen oxides (NOx), The units each have the potential to emit more than 100 tons per year of each of this pollutant for which emissions limits apply and use control devices to comply with the limit.

Emissions of NOx from the three boilers are controlled by selective non-catalytic reduction (SNCR). Each boiler is subject to the same emission limitation of 0.10 pounds of NOx per million Btu (heat input) on a 30-day rolling average basis and each has uncontrolled potential to emit more than 100 tons per year of NOx. Emissions of NOx are required to be continuously

monitored using a continuous emissions monitoring system (CEMS). Each boiler is equipped with its own CEMS for NOx which is installed in the ductwork prior to entering the common stack. These meet the CAM program definition of "continuous compliance determination method" found in Section 64.1. Because Condition III.B.1. requires the use of the CEMS to demonstrate continuous compliance with the NOx emission limits, the exemption from CAM in Section 64.2(b)(vi) applies. CEMS are used in lieu of CAM and CAM does not apply to the NOx emission limits.

Particulate Matter (PM and PM10)
The facility has separate limits for total particulate matter and PM-10. Emissions of both pollutants are controlled by the same type control devices (a combination of multiclones and ESPs). Each boiler has the uncontrolled potential to emit more than 100 tons per year of PM and PM-10. "PM" is not a "regulated air pollutant" and therefore is not subject to CAM. There are no CEMS or other methods of determining continuous compliance for particulates at the facility. Therefore, all three units are subject to CAM for PM-10

Conditions III.B. 4 through 13 contain the CAM requirements for particulate matter.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include wood throughput and shipments, 40 CFR Subpart Db records, and pollutant specific emission factor and equations used to determine compliance with emissions limits. The CAM recordkeeping is also included in this section.

Testing

This permit requires testing of each of the boilers (Units 101, 102, and 103) once each permit term, at a frequency not to exceed once every five years for PM, PM-10, and CO. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The permit requires semi-annual excess and monitoring system performance reporting.
The permit requires CAM reports as part of the Title V semi-annual monitoring reports.

EMISSION UNIT APPLICABLE REQUIREMENTS – Auxiliary Generator-(Unit 110)

Limitations

Condition IV.A.1. specifies the control of the auxiliary generator (Unit 110).

Condition IV.A.2. specifies the fuel for the generator.

Condition IV.A.3 specifies the maximum sulfur content of the No. 2 fuel oil to be used in the auxiliary generator and that the permitted maintain records of all fuel oil shipments purchased.

Condition IV.A.4 limits the amount of No. 2 fuel oil that can be consumed per year.

Condition IV.A.5 requires a maintenance schedule and maintaining records of scheduled and non-schedule maintenance. This condition is taken from the permit issued December 9, 1999.

Condition IV.A.6 specifies the emission limitation for the auxiliary generator (Unit 110). This condition is taken from the permit issued December 9, 1999.

Condition IV.A.7 contains the opacity limitation for the auxiliary generator (Unit 110). This condition is taken from the permit issued December 9, 1999 which was determined to be BACT for the permit.

Periodic Monitoring

Based on the facts that these are auxiliary generators and the annual amount of fuel (24,000 gallons per year approximately 230 hours) consumption is limited, there is no opacity periodic monitoring proposed. The facility is required to calculate the annual consumption monthly as the sum of each consecutive twelve month period.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include emissions data, operating parameters, fuel consumption, sulfur content, opacity observations, and pollutant specific emission factors.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Condition IV.E. specifies that upon request of DEQ, the permittee is to provide reports.

EMISSION UNIT APPLICABLE REQUIREMENTS – Miscellaneous Facility Equipment

Limitations

Condition V.A.1 specifies the fugitive dust limitations. This condition is taken from the permit issued December 9, 1999

Condition V.A.2 specifies the visible emissions limitations from all emission points except the boilers and auxiliary generator. This condition is taken from the permit issued December 9, 1999.

Condition V.A.3 specifies the particulate emission limits from the ash handling operations. This condition is taken from the permit issued December 9, 1999.

Condition V.A.4 specifies the particulate emission control from the storage silo (Unit 301) and ash transfer to trucks. This condition is taken from the permit issued December 9, 1999.

Condition V.A.5 specifies the control of the wood stockpile particulate emissions. This condition is taken from the permit issued December 9, 1999.

Condition V.A.6 specifies the control of the VOC emission from the No. fuel oil storage tanks. This condition is taken from the permit issued December 9, 1999.

Condition V.A.7 requires a maintenance schedule and maintaining records of scheduled and non-schedule maintenance. This condition is taken from the permit issued December 9, 1999.

CAM for Silo (Unit 301)
Source supplied the following calculations to show that the ash silo (Unit 301) was not subject to CAM. The ash is transferred to the silo by an enclosed paddle conveyor system. The silo has a particulate (PM = PM-10) emission limit of 2.9 X 10^{-3} pounds per hour (from condition V.A.3). Condition V.A.4 requires a fabric filter on the silo with at least a 99.9% particulate control efficiency. Using the following formula:
Uncontrolled emissions X (1 – control efficiency) = emission limit
Uncontrolled emission C (1- 0.999) -= 2.9 X 10^{-3} pounds per hour
Solving for uncontrolled emissions = 2.9 pounds per hour.
Converting to annual uncontrolled particulate in tons (2.9 lb/hr X 8760 hours/yr / 2000 lb/ton) yields 12.7 tons of particulate per year. The uncontrolled PM-10 emissions from the ash silo are less than the 100 tons/yr threshold for CAM applicability. Therefore CAM does not apply to the ash silo (Unit 301).

Periodic Monitoring

Condition V.B. contains the opacity periodic monitoring. Monitoring of visible emissions will be required of the source to make an observation of the wood and ash handling equipment at least one time per week, when the unit is operating. They are to observe for the presence of visible emissions from the equipment. If visible emissions are observed, the permittee will have to take timely corrective action to resume operations without visible emissions or perform a VEE in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions compliance. The permittee will keep a log of observations, any VEE recordings, and any corrective action. If the unit has not operated during the week, this fact shall be noted in the log, and that the visible emission observation was not required. Also, if visible emissions have been conducted for 12 consecutive weeks and no visible emissions are seen, the permittee may reduce the monitoring frequency to once per month for the stack.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include maintenance and visible emissions and opacity observations.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Condition V.D. specifies that upon request of DEQ, the permittee is to provide reports.

EMISSION UNIT APPLICABLE REQUIREMENTS – Facility Wide Conditions

Limitations

Condition VI.A. specifies the facility-wide opacity limitation.

Condition VI.B.1 specifies control of fugitive emissions from access and facility roads. This condition is taken from the permit issued December 9, 1999.

Condition VI.B.2 requires the permittee to develop, maintain, and have available to all operators good operating procedures for all air pollution control equipment. They shall have a maintenance

schedule and keep records. This condition is taken from the permit issued December 9, 1999.

Condition VI.B.3 requires a maintenance schedule and maintaining records of scheduled and non-schedule maintenance. This condition is taken from the permit issued December 9, 1999.

Condition VI.C requires a physical barrier at the property line that restricts public access to the property. This condition is taken from the permit issued December 9, 1999.

Monitoring

None

Recordkeeping

Condition VI.B.3 requires records of scheduled and non-scheduled maintenance. This condition is taken from the permit issued December 9, 1999.

Testing

The permit does not require facility-wide source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

None

Streamlined Requirements

None

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-2003".

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

J. Permit Modification

This general condition cites the sections that follow:
9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

STATE ONLY APPLICABLE REQUIREMENTS

There are no state-only requirements.

FUTURE APPLICABLE REQUIREMENTS

This facility is a major source for hazardous air pollutants (HCl and benzene) from the three boilers.

In their decision dated 6/8/07 the District of Columbia Circuit Court of Appeals vacated 40 CFR Subpart DDDDD (the boiler MACT). Specific guidance on how to address this situation is currently being considered, and will be applied when available.

INAPPLICABLE REQUIREMENTS

The two fuel oil tanks (Units 121 and 122) hold only 10,000 (37.9 M^3) gallons each. These tanks are smaller than the 75 m^3 (19,812 gallons) NSPS Kb applicability level.

The auxiliary generator (Unit 110) is included in the source category MACT Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The unit is a compression ignited (CI), reciprocating internal combustion engine (RICE) constructed before December 19, 2002. Per 63.6590 (b)(3), existing RICE CI engines (engines constructed before December 19, 2002) do not have to meet the requirements of MACT ZZZZ and Subpart A and no initial notification is required. There are no applicable MACT requirements for the auxiliary generator.

The auxiliary generator (Unit 110) is also not subject to Part 60 Subpart IIII – NSPS – Standards of Performance for Stationary Compression ignition Internal Combustion Engines (ICE). Per 40 CFR Part 60 60.4200(a)(2)(i) "Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE is manufactured after April 1, 2006 are subject to this subpart. The auxiliary generator was manufactured prior to 2002. There are not applicable NSPS requirements for the auxiliary generator.

COMPLIANCE PLAN

A compliance plan is not required.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

See Permit VII.

The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be place on public notice in the Altavista Journal from [date] to [date] .